



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/020,862	12/14/2001	John Iselin Woodfill	INT1P102C2	1727
21912	7590	07/30/2004	EXAMINER	
VAN PELT & YI LLP 10050 N. FOOTHILL BLVD #200 CUPERTINO, CA 95014			JOHNS, ANDREW W	
			ART UNIT	PAPER NUMBER
			2621	
DATE MAILED: 07/30/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/020,862

Applicant(s)

WOODFILL ET AL.

Examiner

Andrew W. Johns

Art Unit

2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 3-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 March 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Priority

1. This application discloses and claims only subject matter disclosed in prior Application No. 08/839,767, filed 15 April 1997, and names an inventor or inventors named in the prior application. Accordingly, this application may constitute a continuation or division. Should applicant desire to obtain the benefit of the filing date of the prior application, attention is directed to 35 U.S.C. 120 and 37 CFR 1.78.

Specification

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Drawings

3. The drawings are objected to because the bottom margins for Figures 16G, 19B, 24B, 25A, 25B, 28B, 30, 36, 38B, 39A, 39B, 40A, 40B, 41B, 41C, 42B, 45B, 46, 50, 52, 54, 61, 61B, 61C, 61H, 61I, 62, 62A, 62I, 62J, 63C, 63J, 67, and 68 are not at least 1 cm (3/8 inch) as required by 37 C.F.R. § 1.84(g). Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the

remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 C.F.R. § 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 U.S.C. § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 3-9 are rejected under 35 U.S.C. § 102(b) as being anticipated by Gennery (US 4,703,513 A).

Gennery teaches a transform generator and method for generating census vectors for elements of a data set having a plurality of elements, including a row delay unit (16 in Figures 1 and 2) having a plurality of delays (R_N , R_{N+1} , and R_{N+2} in Figure 2) for receiving an ordered stream of elements of the data set (i.e., the 12-bit pixel input shown in Figures 1 and 2) and propagating the ordered stream of elements through the plurality of delays (column 2, lines 31-43), as variously required by claims 3 and 7.

Gennery also teaches a transform generator and method for generating census vectors for elements of a data set having a plurality of elements, including a comparator unit (18 in Figures 1 and 3) having a plurality of comparators (C_1 - C_9 in Figure 3) for receiving elements of the data set (i.e., the nine 12-bit pixels output from the delay unit 16 into the comparator unit 18, in

Figure 1) and comparing a received reference element (i.e., the “Fixed Threshold” shown in Figure 1) to each of a selected plurality of received elements in order to generate a census vector for the reference element (i.e., the 9-bit output of the comparator unit 18, in Figure 1), as variously required by claims 2 and 8.

5 Additionally, Gennery teaches a transform generator and method for generating census vectors for elements of a data set having a plurality of elements, including a row delay unit (16 in Figures 1 and 2) having a plurality of delays (R_N , R_{N+1} , and R_{N+2} in Figure 2) for receiving an ordered stream of elements of the data set (i.e., the 12-bit pixel input shown in Figures 1 and 2) and propagating the ordered stream of elements through the plurality of delays (column 2, lines 10 31-43), and a comparator unit coupled to the row delay unit (18 in Figures 1 and 3) having a plurality of comparators (C_1 - C_9 in Figure 3) for receiving elements of the data set propagated through the row delay unit (i.e., the nine 12-bit pixels output from the delay unit 16 into the comparator unit 18, in Figure 1) and comparing a received reference element (i.e., the “Fixed Threshold” shown in Figure 1) to each of a selected plurality of received elements in order to 15 generate a census vector for the reference element (i.e., the 9-bit output of the comparator unit 18, in Figure 1), as variously required by claims 5 and 9.

20 Finally, Gennery further teaches that the elements of the data set represent pixel intensities of an image having M rows and N columns of pixels (column 2, line 19; the data elements are 12-bit pixel values, which conventionally form a 2-dimensional image of rows and columns); that the row delay unit includes a plurality of group of delays (rows R_N and R_{N+1} in Figure 2), each group having N delays (Note that these rows each includes an N-3 pixel delay coupled to 3 additional registers for a total of N delays), wherein the groups are interconnected such that the ordered stream of elements propagates among the groups (Note that R_{N+2} feeds or

propagates into R_{N+1} , which in turn propagates into R_N); and generating census vectors for reference elements within a census transform window (column 2, lines 31-34) having a number of rows substantially equal to the number of groups of delays in row delay unit (i.e., the 3x3 window corresponds to the three rows R_N , R_{N+1} , and R_{N+2}), as additionally required by claim 6.

Therefore, Gennery meets each of the limitations of the claimed invention and anticipates the claims.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited references each teaches various row delay and comparator units.

Notice to Applicant

7. The papers filed on 22 March 2002 (certificate of mailing dated 11 March 2002) and on 07 May 2002 (certificate of mailing dated 10 April 2002) have not been made part of the permanent records of the United States Patent and Trademark Office (Office) for this application (37 C.F.R. § 1.52(a)) because of damage from the United States Postal Service irradiation process. The above-identified papers, however, were not so damaged as to preclude the USPTO from making a legible copy of such papers. Therefore, the Office has made a copy of these papers, substituted them for the originals in the file, and stamped that copy:

COPY OF PAPERS ORIGINALLY FILED

If applicant wants to review the accuracy of the Office's copy of such papers, applicant may either inspect the application (37 C.F.R. § 1.14(d)) or may request a copy of the Office's records of such papers (i.e., a copy of the copy made by the Office) from the Office of Public Records for the fee specified in 37 C.F.R. § 1.19(b)(4). Please do **not** call the Technology Center's Customer Service Center to inquiry about the completeness or accuracy of Office's copy of the above-identified papers, as the Technology Center's Customer Service Center will **not** be able to provide this service.

If applicant does not consider the Office's copy of such papers to be accurate, applicant must provide a copy of the above-identified papers (except for any U.S. or foreign patent documents submitted with the above-identified papers) with a statement that such copy is a

complete and accurate copy of the originally submitted documents. If applicant provides such a copy of the above-identified papers and statement within **THREE MONTHS** of the mail date of this Office action, the Office will add the original mailroom date and use the copy provided by applicant as the permanent Office record of the above-identified papers in place of the copy made by the Office. Otherwise, the Office's copy will be used as the permanent Office record of the above-identified papers (*i.e.*, the Office will use the copy of the above-identified papers made by the Office for examination and all other purposes). This three-month period is not extendable.

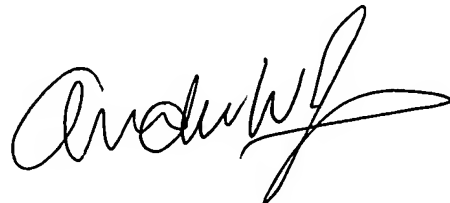
Contact Information

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Johns whose telephone number is (703) 305-4788. The examiner is normally available Monday through Friday, at least during the hours of 9:00 am to 3:00 pm Eastern Time. The examiner may also be contacted by e-mail using the address: andrew.johns@uspto.gov. (Applicant is reminded of the Office policy regarding e-mail communications. See M.P.E.P. § 502.03)

If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Leo Boudreau, can be reached on (703) 305-4706. The fax phone number for this art unit is (703) 872-9306. In order to ensure prompt delivery to the examiner, all unofficial communications should be clearly labeled as "Draft" or "Unofficial."

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center Receptionist whose telephone number is (703) 305-4700.

A. Johns
22 July 2004



**ANDREW W. JOHNS
PRIMARY EXAMINER**